

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-11. (Cancelled)

12. (Currently Amended) An isolated nucleic acid encoding ~~the a~~ truncated α -crystallin polypeptide ~~of claim 1~~, wherein the truncated polypeptide is a wild-type α -crystallin protein that lacks an N-terminal sequence and wherein the truncated polypeptide forms an aggregate having a mass of approximately 60,000 Daltons.

13. (Currently Amended) An isolated nucleic acid ~~encoding the truncated α -crystallin polypeptide~~ of claim ~~[[4]]~~ 12, wherein said N-terminal sequence comprises residues 1-51 of said wild-type protein.

14. (Currently Amended) An isolated nucleic acid that hybridizes, under stringent conditions, to the complement of a ~~the~~ nucleic acid ~~encoding the polypeptide~~ of claim ~~[[1]]~~ 12, wherein stringent conditions comprise incubating the nucleic acids at 68°C in 0.2xSSC or at 42°C in 50% formamide, 4xSSC.

15. (Currently Amended) An isolated nucleic acid that hybridizes, under stringent conditions, to the complement of a ~~the~~ nucleic acid ~~encoding the polypeptide~~ of claim ~~[[4]]~~ 13, wherein stringent conditions comprise incubating the nucleic acids at 68°C in 0.2xSSC or at 42°C in 50% formamide, 4xSSC.

16. (Currently Amended) The isolated nucleic acid of claim 12 that hybridizes, under stringent hybridization conditions, to the complement of a nucleic acid comprising the nucleotide sequence set forth in SEQ ID NO: 2 ~~(Fig. 2)~~, wherein stringent conditions comprise incubating the nucleic acids at 68°C in 0.2xSSC or at 42°C in 50% formamide, 4xSSC.

17. (Currently Amended) The isolated nucleic acid of claim 15 that hybridizes, under stringent hybridization conditions, to the complement of a nucleic acid comprising the nucleotide

sequence set forth in SEQ ID NO: 2 (~~Fig. 2~~), wherein stringent conditions comprise incubating the nucleic acids at 68°C in 0.2xSSC or at 42°C in 50% formamide, 4xSSC.

18. (Withdrawn, Currently Amended) An expression vector comprising: (a) a nucleic acid encoding a small heat shock protein (sHSP); and (b) a nucleic acid encoding a protein, polypeptide, or fragment thereof; wherein said nucleic acids are operatively associated with an expression control sequence; wherein said sHSP is selected from the group consisting of a truncated α -crystallin polypeptide; a chimeric polypeptide comprising (a) a truncated α -crystallin polypeptide and (b) thermophilic sHSP; or combinations thereof; and wherein said truncated α -crystallin polypeptide lacks an N-terminal sequence present in a wild-type α -crystallin protein and wherein the truncated polypeptide forms an aggregate having a mass of approximately 60,000 Daltons.

19. (Cancelled)

20. (Withdrawn, Currently Amended) The expression vector of claim ~~[[19]]~~ 18 wherein said chimeric polypeptide comprises a the truncated α -crystallin polypeptide and thermophilic sHSP.

21. (Cancelled)

22. (Withdrawn, Currently Amended) The expression vector of claim ~~[[21]]~~ 18 wherein said N-terminal sequence is hydrophobic.

23. (Withdrawn) The expression vector of claim 22 wherein said N-terminal sequence precedes a common domain in said wild-type protein.

24. (Withdrawn, Currently Amended) The expression vector of claim ~~[[21]]~~ 18 wherein said N-terminal sequence comprises residues 1-51 of said wild-type protein.

25. (Withdrawn, Currently Amended) The expression vector of claim ~~[[21]]~~ 18 comprising the sequence set forth in SEQ ID NO: 2.

26. (Withdrawn, Currently Amended) A method of enhancing expression of a protein in a host cell comprising coexpressing said protein with a small heat shock protein (sHSP); wherein said sHSP is selected from the group consisting of a truncated α -crystallin polypeptide; a chimeric polypeptide comprising (a) a truncated α -crystallin polypeptide and (b) a thermophilic sHSP; and combinations thereof; wherein said truncated polypeptide lacks an N-terminal sequence present in a wild-type protein; and wherein the truncated polypeptide forms an aggregate having a mass of approximately 60,000 Daltons.

27. (Cancelled)

28. (Withdrawn, Currently Amended) The method of claim [[27]] 26 wherein said chimeric polypeptide comprises a the truncated α -crystallin polypeptide and a the thermophilic sHSP.

29. (Cancelled)

30. (Withdrawn, Currently Amended) The method of claim [[29]] 26 wherein said N-terminal sequence is hydrophobic.

31. (Withdrawn) The method of claim 30 wherein said N-terminal sequence precedes a common domain in said wild-type protein.

32. (Withdrawn, Currently Amended) The method of claim [[29]] 26 wherein said N-terminal sequence comprises residues 1-51 of said wild-type protein.

33. (Withdrawn) The method of claim 32 wherein said truncated polypeptide comprises the sequence set forth in SEQ ID NO: 3.

34. (Withdrawn, Currently Amended) A thermotolerant host cell genetically modified to express a small heat shock protein (sHSP); wherein said sHSP is selected from the group consisting of a truncated α -crystallin polypeptide; a chimeric polypeptide comprising (a) a truncated

α -crystallin polypeptide and (b) a thermophilic sHSP; and combinations thereof; wherein said truncated polypeptide lacks an N-terminal sequence present in said wild-type protein and wherein the truncated polypeptide forms an aggregate having a mass of approximately 60,000 Daltons.

35. (Cancelled)

36. (Withdrawn, Currently Amended) The host cell of claim [[35]] 34 wherein said chimeric polypeptide comprises a the truncated α -crystallin polypeptide and a the thermophilic sHSP.

37. (Cancelled)

38. (Withdrawn, Currently Amended) The host cell of claim [[37]] 34 wherein said N-terminal sequence is hydrophobic.

39. (Withdrawn, Currently Amended) The host cell of claim [[37]] 34 wherein said N-terminal sequence precedes a common domain in said wild-type protein.

40. (Withdrawn, Currently Amended) The host cell of claim [[37]] 34 wherein said N-terminal sequence comprises residues 1-51 of said wild-type protein.

41. (Withdrawn) The host cell of claim 40 wherein said truncated polypeptide comprises the sequence set forth in SEQ ID NO: 3.

42. (New) An isolated nucleic acid encoding a truncated α -crystallin polypeptide, wherein the truncated polypeptide is a wild-type α -crystallin protein that lacks an N-terminal sequence, and wherein the truncated polypeptide retains the ability of the wild-type protein to prevent protein aggregation.

terminal sequence present in said wild-type protein, and wherein the truncated polypeptide retains the ability of the wild-type protein to prevent protein aggregation.

48. (New) The isolated nucleic acid of claim 12, wherein the truncated polypeptide comprises the amino acid sequence set forth in SEQ ID NO:3.

49. (New) The isolated nucleic acid of claim 49, wherein the nucleic acid comprises the nucleotide sequence set forth in SEQ ID NO:2.